

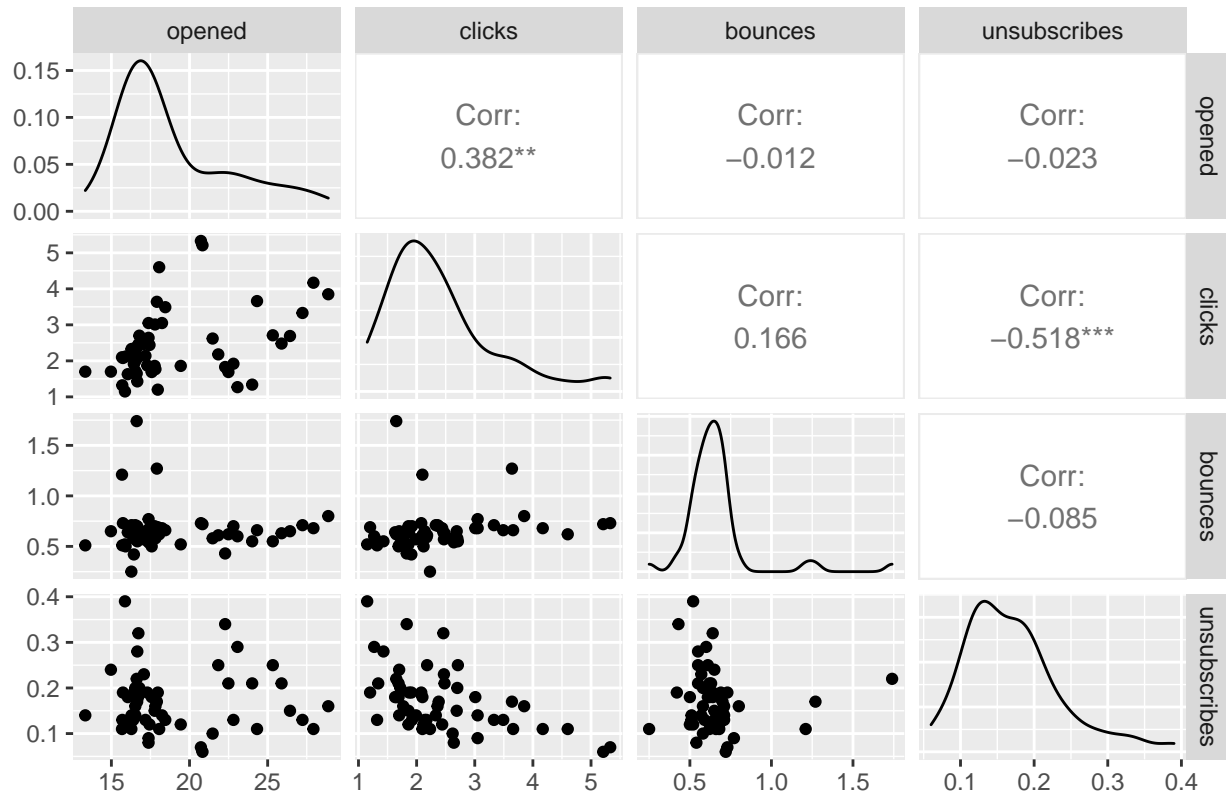
# Analysis of Weekly Newsletters: Initial Report

The open percentage is

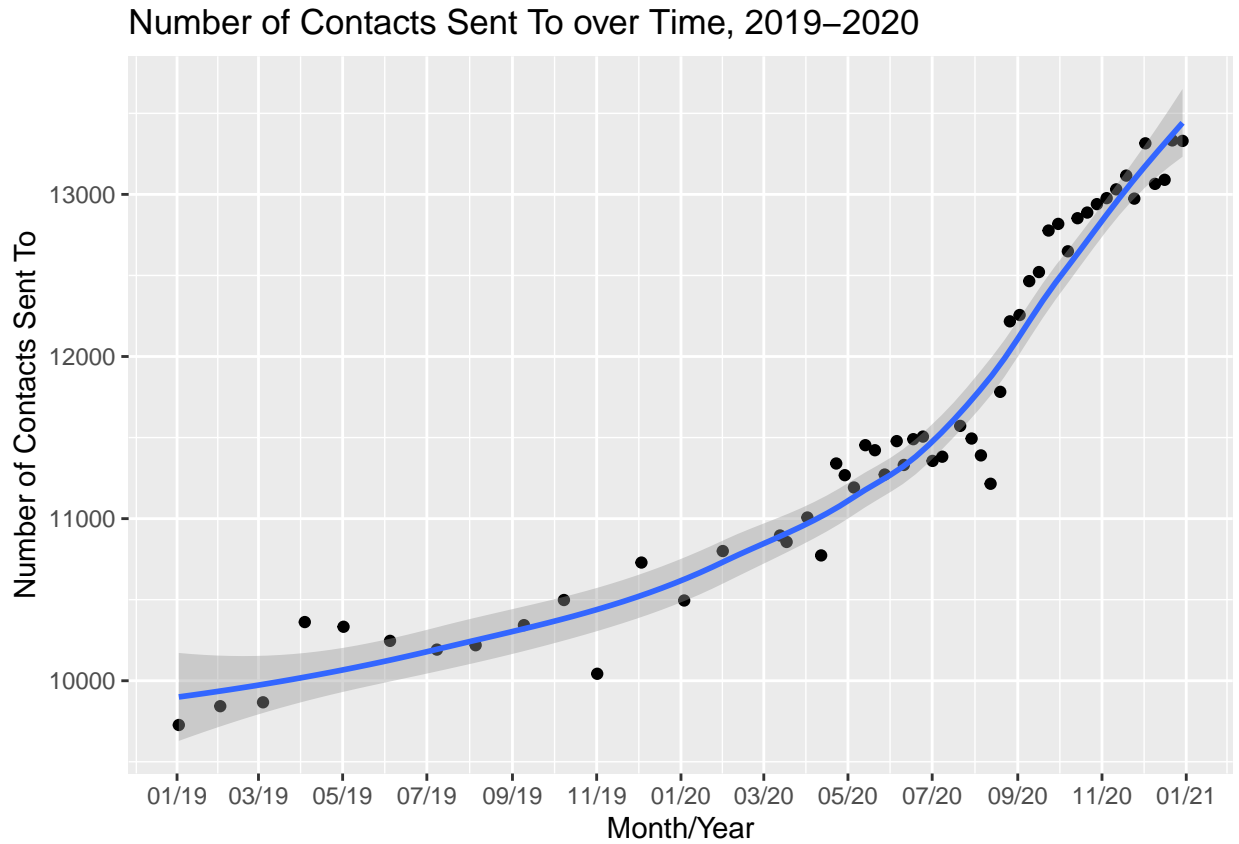
$$\text{Open \%} = \frac{\text{number of contacts who opened the email}}{\text{number of contacts sent to}} \times 100\%$$

## Correlation of the Metrics

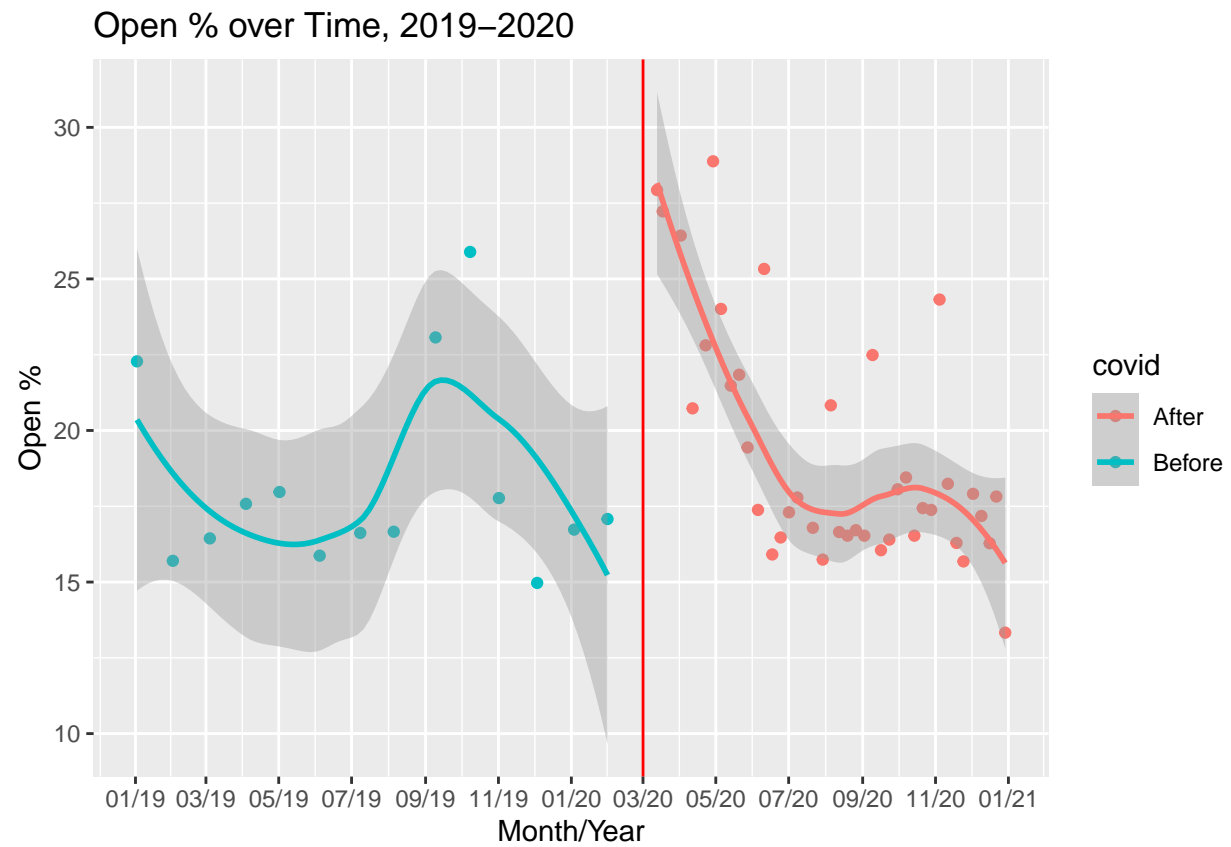
Correlogram of the Metrics



## Summary Statistics over Time, 2019-2020

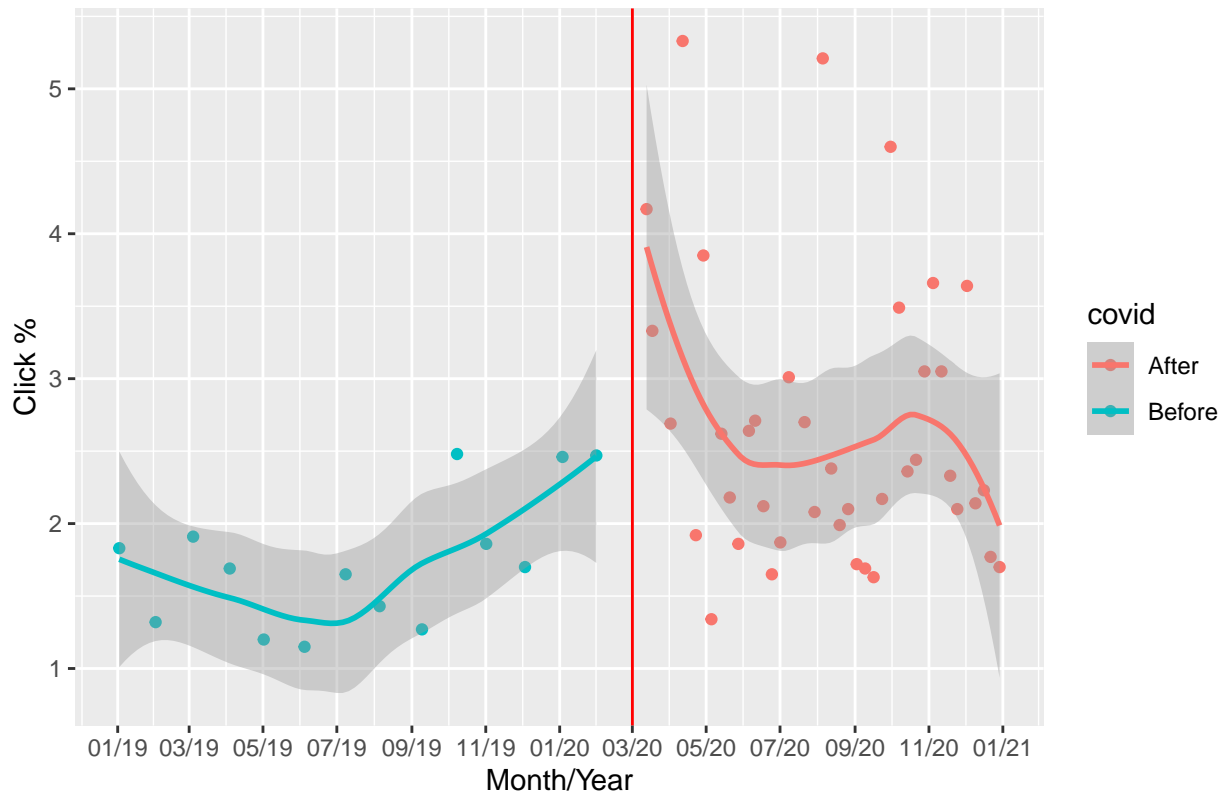


When did the pandemic start changing things? The March 12 weekly newsletter was the first one to mention the COVID-19 pandemic and remote volunteering opportunities.

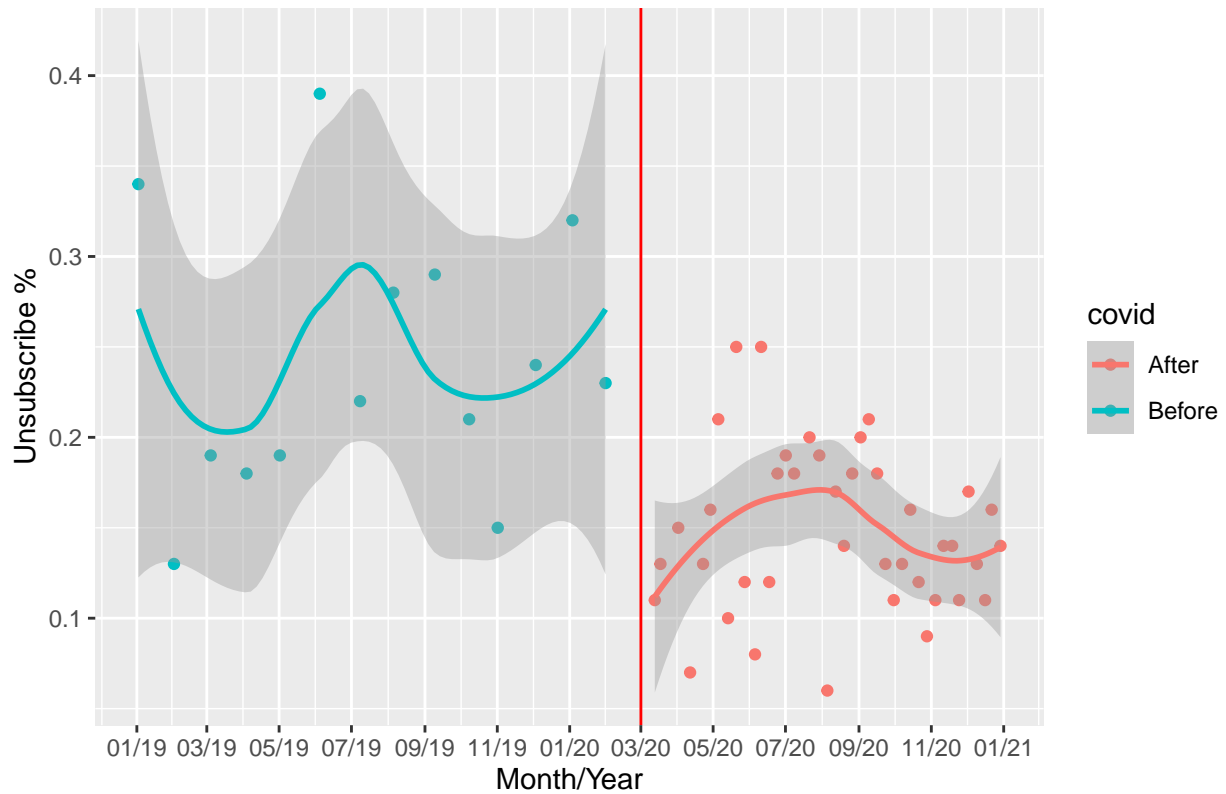


There is a spike in the open % after March.

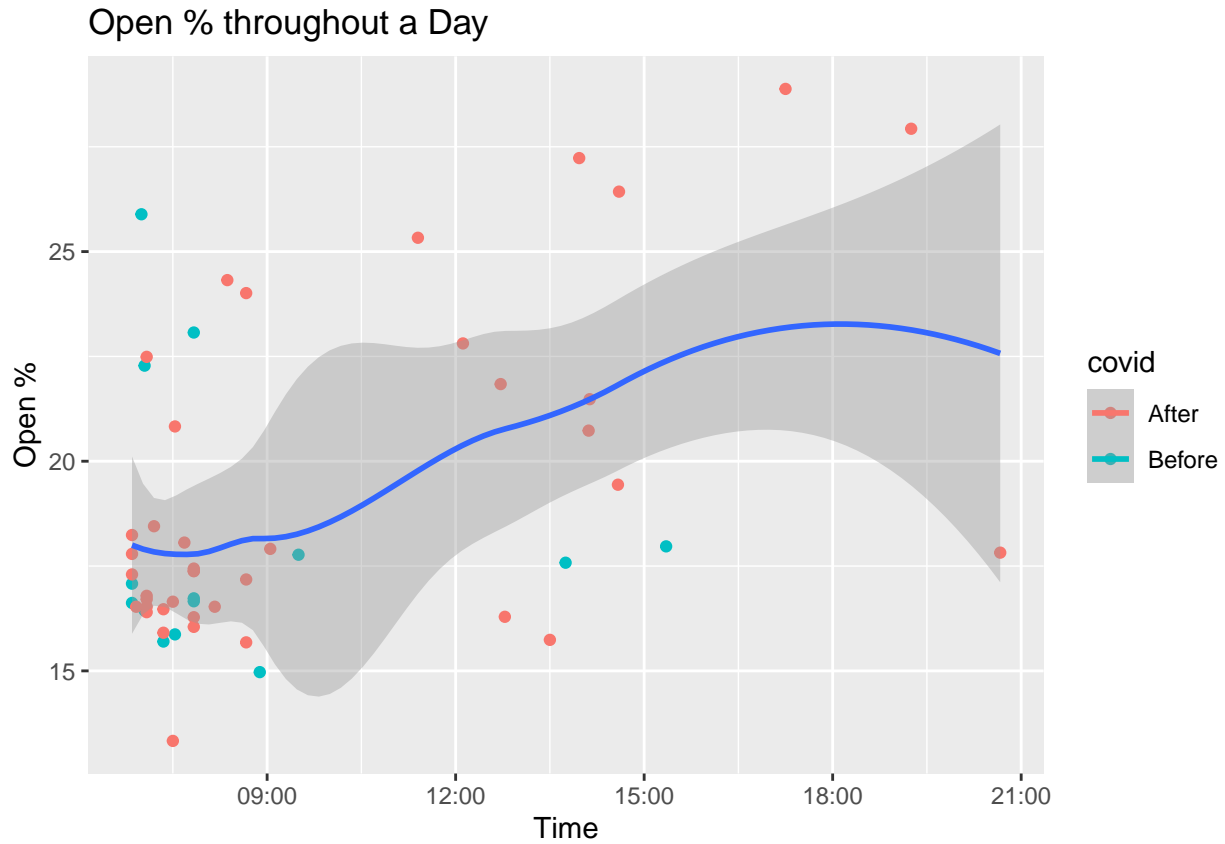
Click % over Time, 2019–2020



Unsubscribe % over Time, 2019–2020



## Summary Statistics throughout a Day

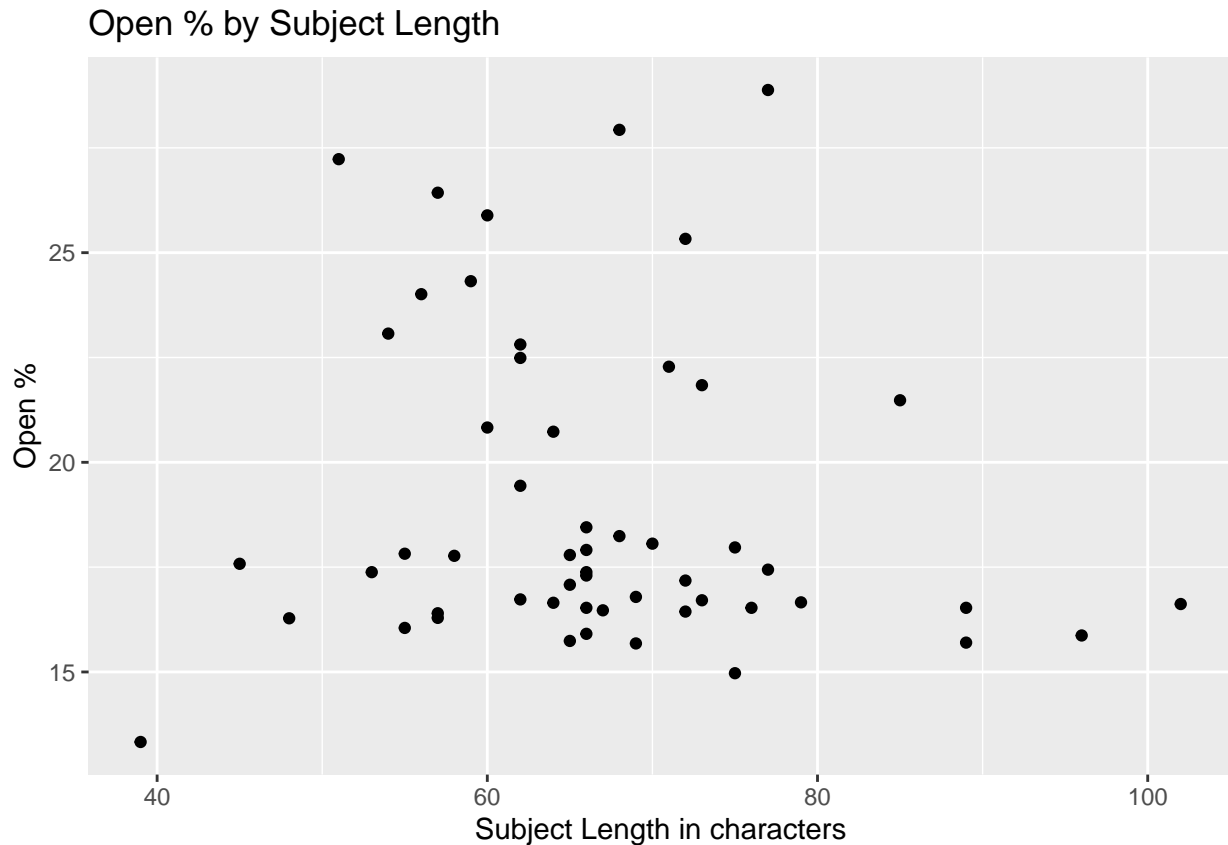


There may be a slight upward trend.

## Effect of Subject Headings

Summary Statistics for number of characters within subject heading

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	39.00	59.25	66.00	66.57	72.00	102.00



Plotting by the number of words yields a similar plot.

Small speculation: if subject heading is too long, it may not fit in the email browser and thus lead to less opens.

## Modeling

```
##
## Call:
## lm(formula = opened ~ datetime * covid + mins_since_midnight +
##     subject_length, data = weeklies1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -4.8269 -1.8572 -0.7436  1.7317  7.7023
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   3.031e+01  1.191e+02  0.254  0.80022
## datetime      -7.322e-09  7.574e-08 -0.097  0.92339
## covidAfter     4.577e+02  1.573e+02  2.909  0.00547 **
## mins_since_midnight 4.513e-03  2.148e-03  2.102  0.04086 *
## subject_length -4.200e-02  3.663e-02 -1.147  0.25727
## datetime:covidAfter -2.861e-07  9.960e-08 -2.873  0.00604 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##  
## Residual standard error: 2.94 on 48 degrees of freedom  
## Multiple R-squared:  0.4375, Adjusted R-squared:  0.3789  
## F-statistic: 7.466 on 5 and 48 DF,  p-value: 3.005e-05
```